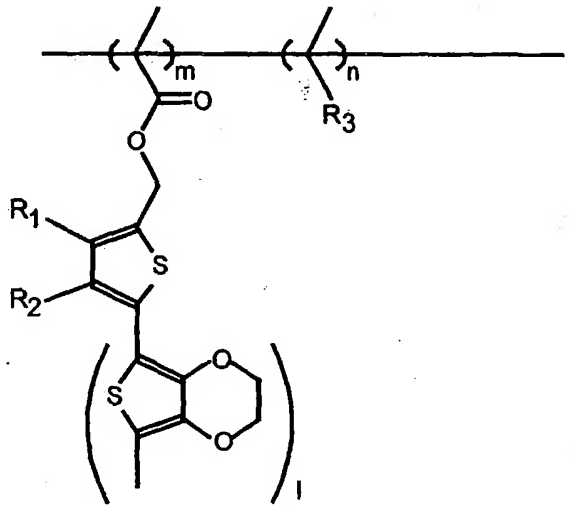
We Claim:

1. A polymerizable composition for use in electron beam lithography having a structural formula:



wherein

m is a first number from 0.1 to 0.9;

n is a second number from 0.1 to 0.9 with m+n=1;

I is an integer from 1 to 100;

R_1 is a first substituent selected from the group consisting of H, an alkyl, a halogen, an amine, a silicon compound, and a germanium compound, said first substituent having a chain length of up to six carbon, silicon, or germanium atoms;

R_2 is a second substituent selected from the group consisting of H, an alkyl, a halogen, an amine, a silicon compound, and a germanium compound, said second substituent having a chain length of up to six carbon, silicon, or germanium atoms; and

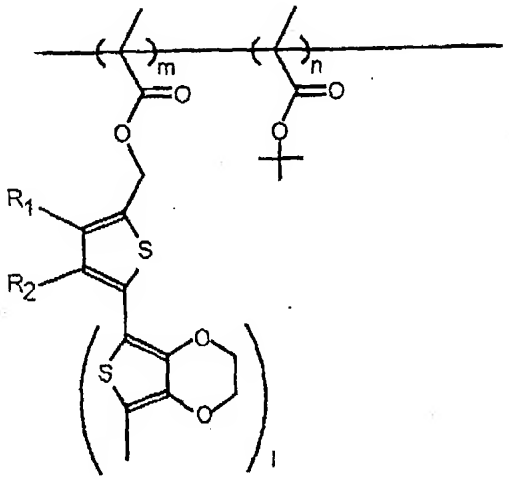
R_3 is an eliminatable organic protective group.

2. The polymerizable composition according to claim 1, wherein R_1, R_2, and R_3 are identical.

3. The polymerizable composition according to claim 1, wherein R_1, R_2, and R_3 are different.

4. The polymerizable composition according to claim 1, wherein R_3 is an organic protective group eliminatable by acid.

5. The polymerizable composition according to claim 4, wherein said structural formula is:



6. The polymerizable composition according to claim 5, wherein R_1 and R_2 are identical.

7. The polymerizable composition according to claim 5, wherein R_1 and R_2 are different.

8. The polymerizable composition according to claim 1, wherein R_3 includes a functional group selected from the group consisting of a tert-alkyl ester group, a tert-butoxycarbonyloxy group, an acetal group, a tetrahydrofuranyl group, and a tetrahydropyranyl group.

9. The polymerizable composition according to claim 8, wherein R_3 includes a tert-butyl ester.

10. The polymerizable composition according to claim 1, further comprising a unit selected from the group consisting of a ter-polymer and a quarterpolymer.

11. A polymer comprising said polymerizeable composition according to claim 1.

12. A resist, comprising:

said polymer according to claim 11;

an organic solvent and; and

an additive being at least one of photosensitive and electron beam-sensitive.

13. The resist according to claim 12, wherein:

said polymer forms from 2 to 30% of the resist;

said solvent forms from 70 to 98% of the resist; and

a photo acid generator forms from 0.1 to 10% of the resist.

14. The resist according to claim 12, wherein said organic solvent is selected from the group consisting of methoxypropyl acetate, ethyl acetate, ethyl lactate, cyclohexanone, gamma-butyrolactone, and methyl ethyl ketone.

15. The resist according to claim 13, wherein said photo acid generator is selected from the group consisting of a Crivello salt, triphenylsulfonium sulfonate, diphenyliodonium sulfonate, phthalimidosulfonate, and ortho-nitrobenzyl sulfonate.

16. The resist according to claim 12, further comprising at least one of 50 to 98% of 1-methoxy-2-propane sulfonate and 0.1 to 10% of triphenylsulfonium hexafluoropropanesulfonate.

17. The resist according to claim 12 for use in an electron beam recording process.

18. A lithography process for producing a structure on a substrate, which comprises using the resist according to claim 12.

19. The lithography process according to claim 18, wherein the structure is a lithography mask for producing a semiconductor component.

20. The lithography process according to claim 18, which further comprises:

a) coating a mask blank with the resist according to claim 12;

b) recording the resist by using an electron beam recorder;

c) developing the structure in the resist; and

d) dry-etching the mask blank.

21. The lithography process according to claim 18, further comprising heating the resist after recording on the resist.